

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

**Artisan Technology Group**
(217) 352-9330 | sales@artisantg.com | artisantg.com

**Full-service, independent repair center**
with experienced engineers and technicians on staff.

**We buy your excess, underutilized, and idle equipment**
along with credit for buybacks and trade-ins.

**Custom engineering**
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

**Expert team | Trust guarantee | 100% satisfaction**

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

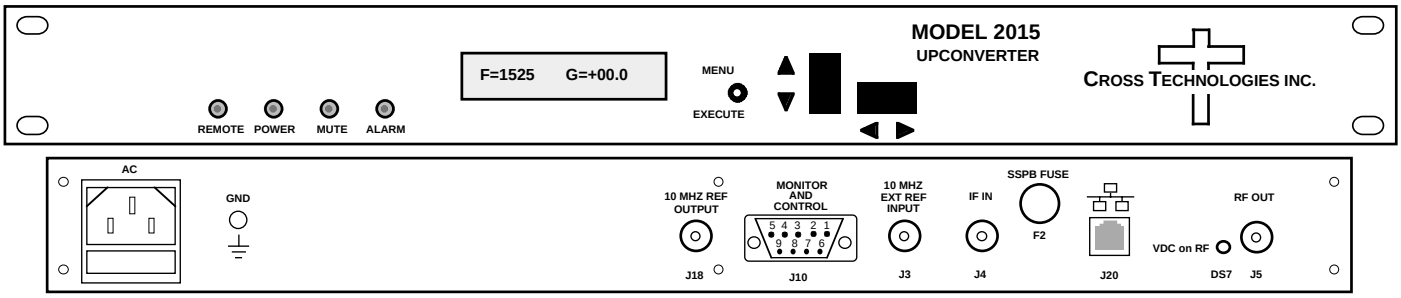
**Visit our website - *Click HERE***

CROSS TECHNOLOGIES, INC.

**DATA SHEET**
**Rev. K**
08/29/18

# 2015-02 Upconverter, 70 MHz to 0.95 - 2.15 GHz

The 2015-02 L-band Upconverter converts 70 ± 18 MHz to 950 to 2150 MHz in 1 MHz steps **(125 kHz to 1 kHz step options available)**. Synthesized local oscillators (LO) provide frequency selection. Push button switches select the RF frequency, gain, and other parameters. Front panel LEDs provide indication of DC power (green), PLL alarm (red), remote operation (yellow) and TX carrier MUTE (yellow). Variable attenuators for the IF input and output provide a gain range of -10 to +30 dB as adjusted by the front panel push-button switches. Remote operation allows selection of frequency and gain. Parameter selection and frequency and gain settings appear on the LCD display. Connectors are BNC female for IF and the optional external reference input and output, and Type F female for the RF output. SSPB **+24 or +48 VDC** and 10 MHz reference can be inserted on the RF line as added options. **The external 10 MHz option E** includes a 10 MHz output connector which contains either the internal or external 10 MHz reference signal. A high stability internal reference (**option H**, ±0.01ppm) is also available. It is powered by a 100-240 ± 10% VAC power supply, and housed in a 1 3/4" X 19" X 16" rack mount chassis.



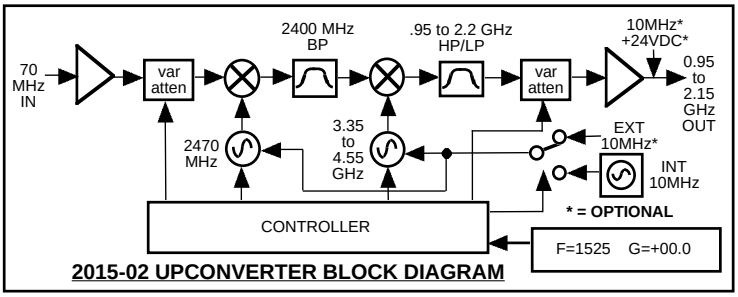

## EQUIPMENT SPECIFICATIONS* 2015-02 Front and Rear Panels (Optional Ethernet and SSPB insertion shown)

**Input Characteristics (IF)**

| | |
|---|---|
| Impedance/Return Loss | 75 Ω /18 dB |
| Frequency | 70 ± 18 MHZ |
| Input Level | -40 to -10 dBm |

**Output Characteristics (RF)**

| | |
|---|---|
| Impedance/Return Loss | 75 Ω/12 dB |
| Frequency | 950 to 2150 MHz |
| Output level | 0 to -20 dBm |
| Output 1 dB comp. | +5 dBm |



**2015-02 UPCONVERTER BLOCK DIAGRAM**

**Channel Characteristics**

| | |
|---|---|
| Gain range (adjustable) | -10.0 to +30.0 dB, **1 ±1 dB steps** |
| Frequency Response | ±1.5 dB, 950 - 2150 MHz; ± 0.5 dB, 36 MHz BW; **±1.0 dB, 40 MHz BW** |
| Spurious Response | < -50 dBC, in band |
| Group Delay, max | **0.015** ns/MHz$^2$ parabolic; **0.05** ns/MHz linear; 1 ns ripple |
| Frequency Sense | Non-inverting |

**Synthesizer Characteristics**

| | |
|---|---|
| Frequency Accuracy | ± 1.0 ppm max over temp (±0.01 ppm, option **H**) |
| Frequency Step | 1.0 MHz **(125 kHz to 1 kHz step options available)** |

| *Phase Noise @ F (Hz) >* | *10* | *100* | *1K* | *10K* | *100K* | *1M* |
|---|---|---|---|---|---|---|
| *dBC/Hz* | ***-55*** | ***-70*** | ***-70*** | *-80* | *-90* | *-110* |

| | |
|---|---|
| 10 MHz Level (In or Out) | 3 dBm, ± 3 dB, 75 ohms (option **E**) |

**Controls, Indicators**

| | |
|---|---|
| Freq/Gain Selection | direct readout LCD; manual or remote selection |
| Pwr; Alarm; Rem; Mute | Green LED; Red LED; Yellow LED; Yellow LED |
| Remote | RS232C, 9600 baud **(RS485, Ethernet Optional)** |

**Other**

| | |
|---|---|
| RF, IF Connectors | Type F (female), BNC (female) |
| 10 MHz Connectors | BNC (female)**, 75Ω, works with 50 or 75 ohms** (option **E**) |
| Alarm/Remote Connector | DB9 (female) - NO or NC contact closure on Alarm |
| Size | 19 inch, 1RU standard chassis 1.75" H X 16.0" D |
| Power | 100-240 ±10% VAC, 47-63 Hz, **25** W max. **(24 , 48 VDC Optional)** |

*10˚C to 40˚C; Specifications subject to change without notice.

**Available Options**

E - External 10 MHz ref in & out; RF Ins.
H - High Stability (±0.01ppm) Internal Ref
V - SSPB Voltage, +24VDC, 2.5 amps
**V48 - SSPB Voltage, +48VDC, 1.25 A**
**V41 - SSPB Voltage, +48VDC, 2.10 A**
X or X1- 125 kHz or 100 kHz step size
**X1002 - 1 kHz step, includes option - H**
**Z 5**- Attenuator **0.5 ± 0.5dB** Steps

**Comm. Interface/Standard RS232**

Q - RS485 Remote Interface
W8 - Ethernet; w/Web Browser (WB)
W18 - Ethernet; w/WB & SNMP
W28 - Ethernet; w/TCP/IP, Telnet

**Connectors/Impedance**

B - 75Ω BNC (RF), 75Ω BNC (IF)
C - 50Ω BNC (RF), 75Ω BNC (IF)
D - 50Ω BNC (RF), 50Ω BNC (IF)
N - 50Ω N-type (RF), 75Ω BNC (IF)
M - 50Ω N-type (RF), 50Ω BNC (IF)

**Cross Technologies, Inc. • www.crosstechnologies.com**
6170 Shiloh Road • Alpharetta, GA 30005 • 770.886.8005 • FAX 770.886.7964

**Artisan Technology Group** is an independent supplier of quality pre-owned equipment

## Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

## We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

## Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP